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**ADMINISTRATIVE AND FINANCIAL
ORGANIZATION OF THE
NATIONAL VETERINARY INSTITUTE,
DEBRÉ-ZEIT, ETHIOPIA**

by

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1. MISSION TO THE NVI IN DEBRE ZEIT, 19.11.94 - 3.12.94

The purpose of this third mission was to study the administrative, financial and accounting organization to be set up. The mission's aim was to finalize the NVI's organization in the context of the management autonomy proposed in the previous report. The current administrative and accounting organization is really not suited to the needs of an independent industrial enterprise. As we recommended in the last report, we must therefore progressively set up an organisation allowing the managers to run the NVI's activities in full knowledge of the necessary facts.

The terms of reference are as follows:

- Establishment of the administrative, financial and accounting organization.
- Management control: implementation of the necessary computer systems
- Budgeting control: at the request of Dr. Mebratu, priority was given to the study of the current cost price of the various vaccines produced at Debré-Zeit. It is necessary to compare the cost price with the international selling prices in order to ensure that the NVI is competitive.

Because of the limited time available, we modified the planned program. In particular, we considered that the implementation of management control could be delayed, especially since nobody working at the NVI has currently received sufficient training to take part.

With the help of two employees from the Accounting Department, we studied the following aspects:

- . the accounting plan
- . budget estimates
- . cost prices

Lastly, we studied with Dr. Mebratu the profile of the person to be recruited for the job of Administrative and Financial Director.

2. ACCOUNTING PLAN - DETAILS OF THE ACCOUNTS

The accounting plan was studied in two phases. First, we analyzed the NVI's requirements in order to choose the accounts necessary to establish the profit and loss account. In the second phase, we studied the requirements for drawing up the balance sheet. The initial basis for this work was the French accounting plan with its numbering scheme, which we retained.

Obviously, in comparison with the French plan, which is relatively complex and has to take into account restrictive fiscal legislation, the number of accounts was considerably reduced.

The choice was made with the help of two employees from the Accounting Department.

Profit and Loss Account
Details of the Items

6th Class

Purchases

601 Purchase of raw materials

- 6011 Chemical products
- 6012 Biological products
- 6013 Other raw materials
- 6014 Bottles

602 Purchase of consumable materials

- 6021 Products for cleaning bottles
- 6022 Other products

603 Consumable purchases

- 6031 Labels and gums
- 6032 Maintenance products
- 6033 Stationery

604 Packaging

- 6041 Wooden boxes
- 6042 Polystyrene boxes

605 Small equipment

606

- 6061 Water
- 6062 Electricity
- 6063 Fuel generator cost

61 External Purchases

611 Subcontracts

612 Rent of houses and offices

613 Maintenance

- 6131 Maintenance of buildings
- 6132 Maintenance of equipment
- 6133 Maintenance of cars
- 6134 Maintenance of office equipment and furniture
- 6135 Maintenance of gardens including labor cost

614 Insurance

- 6141 Insurance for fire, storm, flood
- 6142 Insurance for cars
- 6143 Other insurance

615 Research and development

- 6151 Purchase of animals
- 6152 Feed for animals
- 6153 Labor cost
- 6154 Other expenses

616 Miscellaneous (sundry expenses)

- 6161 Library and documentation
- 6162 Others

62 Other external services

621 External temporary contracts (labor)

622 Commissions and fees

- 6221 Commissions on purchases
- 6222 Commissions on sales
- 6223 Transit expenses for export
- 6224 Fees
- 6225 Fees for municipalities on purchase of land or buildings

623 Advertising

- 6231 Advertising in magazines
- 6232 Samples
- 6233 Catalogs and printed documents
- 6234 Tips and gifts

624 Transportation (external organization)

- 6241 Transportation of purchases
- 6242 Transportation of sales
- 6243 Transportation of workers

625 Travel

- 6251 Travel - Ticket fares (commercial business)
- 6252 Hotel / restaurant
- 6253 Missions (travel expenses for management and technicians)
- 6254 Reception of visitors

- 626 Postage and telephone
 - 6261 Postage
 - 6262 Telephone, fax, telex
- 627 Miscellaneous external services
 - 6271 Subscriptions
 - 6272 Recruitment
- 63 Taxes
 - 631 Taxes on properties
 - 632 Taxes on sales
- 64 Salaries
 - 641 Salaries for technical work (cleaning of laboratories included)
 - 642 Salaries of administrative staff
 - 643 Provision for vacations
 - 644 Bonuses
 - 645 Indemnities - allowances
 - 646 Social charges
- 65 Other expenses
 - 651 Patent fees
 - 652 Provision for bad debts
- 66 Financial charges
 - 661 Long-term loans interest
 - 662 Bank overdraft interest
 - 663 Loss on foreign currencies
 - 664 Other financial expenses
- 67 Extraordinary charges

68 Depreciation

681 Depreciation of fixed assets

6811 Depreciation of buildings

6812 Depreciation of equipment

68121 Depreciation over 3 years

68122 Depreciation over 5 years

68123 Depreciation over 8 years

68124 Depreciation over 10 years

6813 Depreciation of cars

6814 Depreciation of furniture and office fittings

6815 Depreciation of office equipment (computers)

6816 Other depreciation

682 Depreciation of current assets

6821 Depreciation of inventory

6822 Depreciation of bad debts (unpaid invoices)

Sales and receipts

70 Sales

701 Sales of finished products

7011 Domestic sales

7012 Export

702 Sales of scraps or unuseful materials

703 Studies

704 Sales of purchased finished products

705 Other sales

706 Discount and rebates

71 Variation of inventory

711 Variation of inventory of work in progress

712 Variation of inventory of finished products

72 Production of fixed assets

73 Reimbursement of extra charges

74 Received subsidies

75 Other receipts (royalties, etc.)

76 Financial products

761 Profit on foreign currencies

762 Other financial products (received interest)

77 Extraordinary profits

771 Profit from sales of fixed assets

772 Other extraordinary profits

78 Recovery of provision for bad debts

Balance Sheet Account - Classes 1 to 5

Class 1 - Equity

10

101 Share capital

102 Reserves

11 Reported Earnings

12 Net profit

13 Subsidies

131 Subsidies for purchase of equipment

14 Regimented provisions

15 Provisions

151 Provision for disputes at law

152 Provision for loss on foreign currency

153 Provision for taxes

154 Provisions for expensive repairs

16 Loans and debts

161 Loans from banks

162 Loans from State

163 Other loans

1631 Interest due

Class 2 - Fixed Assets

- 20 Intangible properties
 - 201 Initial expenses
 - 202 Expenses for research and development
- 21 Tangible properties and assets
 - 211 Land
 - 2111 Undeveloped land
 - 2112 Developed land
 - 2113 Built land and sites
 - 212 Development of land
 - 213 Buildings
 - 2131 Buildings
 - 2132 Fittings of buildings
 - 214 Technical fixed assets
 - 2141 Industrial equipment
 - 2142
 - 215 Other tangible fixed assets
 - 2151
 - 2152 Cars and lorries
 - 2153 Office equipment
 - 2154 Computer hardware
 - 2155 Software
 - 2156 Office furniture
 - 2157 Cattle
 - 2158 Recovered packaging
- 23 Assets in progress
 - 231 Land
 - 232 Buildings
 - 233 Equipment
 - 234 Account on orders of fixed assets

- 24 Other financial assets
 - 241 Loans
 - 2411 Loans to shareholders
 - 2412 Loans to employees
 - 2413 Other loans
 - 242 Deposits and guarantees
 - 243 Others
- 28 Depreciation of fixed assets
 - 280 Amortization of intangible assets
 - 2801 Amortization of initial expenses
 - 2802 Amortization of research and development expenses
 - 281 Depreciation of tangible assets
 - 2811 Development of land
 - 2812 Buildings
 - 2813 Industrial equipment
 - 28131 Depreciation over 3 years
 - 28132 Depreciation over 5 years
 - 28133 Depreciation over 8 years
 - 28134
 - 28135
 - 2814 Depreciation of fittings
 - 2815 Depreciation of office equipment
 - 2816 Depreciation of computer hardware
 - 2817 Depreciation of software
 - 2818 Depreciation of office furniture
 - 2819 Depreciation of cattle
 - 2820 Depreciation of recovered packaging
 - 2821 Depreciation of other fixed assets

Class 3 - Inventory

- 31 Raw materials
- 32 Other suppliers
 - 321 Consumable materials
 - 3221 Energy - fuel
 - 3222 Cleaning supplies
 - 3223 Other consumable materials
 - 3224 Stationery
 - 322 Packaging
 - 3221 Lost packaging
 - 3222 Recovered packaging
- 33 Semi-finished products
- 34 Finished products
- 35 Waste to be sold
- 36 Finished products bought for resale
- 37 Provision for depreciation of inventory
 - 371 Provision for depreciation of raw materials
 - 372 Provision for depreciation of other supplies
 - 373 Provision for depreciation of semi-finished products (in progress)
 - 374 Provision for depreciation of finished products
 - 375 Provision for depreciation of products for resale

Class 4 - Current Assets

- 40 Trade creditors
 - 401 Suppliers
 - 402 Suppliers of fixed assets
 - 403 Payment in advance to suppliers
- 41 Trade debtors
 - 411 Customers
 - 412 Doubtful debts
 - 413 Progress payments
 - 414 Amount due on recovered packaging
 - 415 Rebates and discount
- 42 Employees
 - 420 Salaries to be paid
 - 425 Advances on salaries
- 43 Social organization
- 44 State and others
 - 441 Subsidies to be received for capital expenditure
 - 442 Subsidies to be received for production
 - 444 Tax on profit
 - 445 Other taxes
- 46 Sundry debtors and creditors
 - 461 Sundry debtors
 - 462 Sundry creditors
- 48 Provision for depreciation of current assets

Class 5

50 Banks

501 Checks to be paid

502 Bank no. 1

5021 National currency

5022 Foreign currency

503 Bank no. 2

5031 National currency

5032 Foreign currency

510 Other financial organizations

515 Interest due

520 Bank overdraft

53 Cash

3. DESCRIPTION OF THE SOFTWARE REQUIRED FOR ACCOUNTING

There are a large number of general accounting software packages on the market. To facilitate the accountant's job, however, this software must have the following features:

1. It must be capable of double-entry accounting
2. It must be capable of automatically posting the contra of each entry without requiring the code to be reindicated.
3. It must provide automatic balancing and reconciliation.
It must also enable totalization of the accounts under the major headings (see accounting plan).
4. It must be possible to set up a link with the cost accounting system.
5. It must also be possible to set up the link with the inventory management system (kept by the raw materials store or the finished products store) and to view the store data directly on the screen.
6. It must be possible to manage the cash flow accounts with the software.

4. DEFINITION OF THE FUNCTION OF THE ADMINISTRATIVE AND FINANCIAL ACCOUNTING DIRECTOR

The person recruited for this job must have the following qualities:

1. Thorough training in accountancy. He/she will be responsible for:

- . ensuring that the daily book-keeping entries are made correctly and that there are no delays.
- . ensuring that the software is used correctly.
- . complementary training of the staff under his/her management
- . sharing out the work so that it is done under the best possible conditions.

The accounts department must be capable of:

- a) supplying the general management with an income statement every month, including an analysis of any deviations from the budget.
- b) drawing up a full balance sheet at least once a year.

The accounts department must therefore have a link with the stores for inventory management. This means implementing inventory management software.

The accounts department must also keep the fixed assets accounts up to date.

The accounts department is responsible for sending reminders concerning overdue customer invoices.

The Accounting Director will be responsible for ensuring that all these tasks are performed regularly.

The Accounting Director should not hesitate to contact the General Management to ensure that he/she receives the necessary documents on time.

- Preparation of the operating budgets
- Calculation and checking of the cost prices in collaboration with the production departments
- Drawing up tax declarations.

2. Administrative training:

As Administrative Director, the person recruited will have to handle:

- a) the monitoring of the insurance policies
- b) reporting to the local or state authorities concerning the administrative regulations. He/she must be familiar with the legislation governing companies and business law.
- c) supervision of the administrative departments (secretaries, switchboard, purchasing of stationery).

3. Financial training:

- . Cash management - forecasting - financing plan
- . Relations with the banks
- . Supervision of tax and duty
- . Study of return on investments
- . Payment of supplier invoices
- . Supervision of loans

The audit department must be under the direct responsibility of the General Manager.

4. Personnel management:

- . Supervision of the personnel departments
- . Monitoring of correct use of the payroll software
- . Familiarity with the social laws and labor regulations and monitoring of their application.

5. CASH MANAGEMENT

1. In order to facilitate cash management, it is useful to draw up a budget in accordance with the operating budget.

The calculation of the operating revenues and expenditures will take into account the monthly variations in activity and the payment dates.

Investment expenditure (purchase of equipment, etc.), reimbursements and interest on loans must be included in the expenditures.

Similarly, any new loans must be included in the revenues, as must government aid.

2. The cash budget must be divided into 12 periods. After comparing the real activity with the forecast activity, the forecast revenues and expenses must be recalculated in order to adjust them. The forecasts are usually recalculated for the next three months.
3. The table below shows the expenditures and revenues as the accounts system communicates them. Extra columns are provided for entering new forecasts taking into account actual performance. The table proposed is only a model and can be modified to suit the requirements of the NVI.

Cash Management

	Forecast	Actual
Income		
Payments from customers		
Bank Loans		
Other loans		
Subsidies		
Others		
TOTAL		
Expenses		
Salaries		
Social charges		
Raw material suppliers		
Other suppliers		
Capital expenditures		
Reimbursement of loans		
Post - Telephone		
Gas		
Taxes		
TOTAL		
Income less expenses		
Amount available at the beginning of the period		
Amount available at the end of the period		

6. DOCUMENTS NECESSARY FOR COST PRICE MONITORING

To work out the exact cost prices and to be capable of monitoring them regularly, the following organization must be set up:

To be able to manage the cost prices on a microcomputer, the following work must be done beforehand:

- a) Coding of the different types of vaccines
- b) Coding of the different products used to manufacture the vaccines

As the prices of the products will be automatically retrieved from the computer's memory, it will be simple to calculate the consumption of materials.

The following documents will have to be used when a production run is launched:

- Launch order
- Inventory withdrawal form
- Production follow-up form.

The following example should help to make the process clearer :

- Launch of production of 500,000 doses of CBPP

A. A launch order is issued in accordance with the scheduling requirements. This launch order (drawn up in duplicate) must contain:

- a) a reference number
- b) the specification of the vaccine to be produced with the subcode CBPP
- c) the quantities (500,000)
- d) the production deadline

One copy of this launch order will be sent to the person responsible for the production of the CBPP vaccine. The other copy remains with the Scheduling Department.

B. When the head of the CBPP laboratory receives the launch order, he/she fills out an inventory withdrawal form in duplicate.

This document indicates the reference number of the launch order and gives details of the products and quantities required to produce the 500,000 CBPP doses (in compliance with the existing standards). The product codes will also be indicated.

One of the copies is sent to the raw materials store which then supplies the laboratory with the materials requested.

The withdrawals are recorded in the inventory system with the reference number of the launch order.

At the same time, on the microcomputer, a special account bearing the reference number from the launch order is opened. This account is used to enter the types of products delivered, the quantities and the prices.

The purchase prices of the raw materials are recorded on the microcomputer and the average price of the goods in stock is calculated automatically.

C. Should the quantities delivered prove insufficient, the laboratory fills out a complementary withdrawal form in duplicate bearing the reference number of the launch order.

D. When production has finished, the laboratory fills out four copies of a production follow-up form. This indicates:

- a) the reference number of the launch order
- b) the quantities launched and the quantities produced
- c) the time spent by the various technicians.

The first copy is sent to the store, along with the flasks of vaccine, in order to enter them in the finished products inventory.

The second copy goes to the Scheduling Department to indicate that the requested production has been carried out.

The third copy is sent to Accounts (Cost Price Department). Using the salary data stored in its computer memory, the production run can be thoroughly costed, thus determining the Direct Manufacturing Cost.

The laboratory keeps the fourth copy of the production follow-up form.

Accounts - Cost Price Department

To be able to process the documents from the various departments involved, the following are necessary:

1. Microcomputer equipment must be installed.
2. A simple program must be designed to meet the NVT's requirements.
3. The accounts microcomputer must be able to link up with the microcomputer managing the raw materials inventory in order to retrieve all the necessary information concerning the raw material withdrawals corresponding to the production run in question.
4. It must be possible to calculate the other elements contributing to the cost price :
 - bottle-washing
 - maintenance
 - storage
 - fuel and electricity consumption, etc.
5. The forecast depreciation of the equipment used must be calculated and stored in memory.

If all the documents are drawn up regularly and correctly and are sent promptly, calculation of the Direct Manufacturing Cost should not be a problem.

Monitoring the Cost of the Maintenance Department

To monitor the activity of the Maintenance Department and assess its cost, a simple but, hopefully, efficient organization must be set up:

When a laboratory or department requests a maintenance operation, the Maintenance Department must draw up a document (Job Form) in duplicate, indicating:

- the date and time of the operation
- the name of the department making the request
- the name of the employee(s) carrying out the maintenance

When the maintenance operation is finished, the Job Form will be completed by entering details of:

- the time spent
- the references of the spare parts used so that Accounts can cost the operation.

One of the copies is sent to Accounts, while the other is kept by the Maintenance Department.

If this form is filled in for every maintenance operation, it will be possible to determine the actual workload and real cost of the Maintenance Department.

7. MANAGEMENT CONTROL

Management control does not duplicate the general accounting system. It completes the information obtained from monitoring the cost prices by enabling assessment of the actual performance of the enterprise compared with the budget or, if it is not possible to define a budget, with performance during the previous financial year.

By adding together the cost prices of the different vaccine production runs during the period, it will be possible to calculate the total Direct Production Cost for the period. To assess the values obtained, they must be compared with standard values.

Activity

For 1994-95, the NVI has drawn up a quarter-by-quarter production program. This program can be treated as a budget. Monthly or quarterly assessments of actual performance compared with the budget are a good indicator of the NVI's level of activity. The evolution of the NVI's activity can be monitored by comparing the forecast selling prices used in the budget and the actual amount earned from sales.

Raw Materials

The quantities to be used have already been determined and, subject to verification, can be considered standard. It is important to analyze any differences between the quantities actually used in production and the quantities estimated, particularly if there has been an overrun.

An overrun may also be due to an increase in the price of raw materials. In both cases, the selling price must be revised. If this not possible, improved purchase prices should be sought.

Labor

It will be necessary to determine the time allocated for each operation in the production process. The time really spent, which can be assessed by correct production follow-up, will then be compared with the time allocated.

The same checks can be implemented for the other departments linked to production, particularly the Maintenance Department.

The NVI is used to drawing up an annual budget for expenditure and this will facilitate the implementation of management control.

The data obtained from the accounting system and the monitoring of the cost price can be used to draw up a Monthly Report (or Quarterly Report) (see model below).

If all the accounting entries are posted regularly, and there is no delay in calculating the cost prices, it should be possible to produce the monthly report 3 weeks after the end of the month or period in question.

Monthly Report - Quantities

	Monthly Budget		Actual		Variance		%
Production of Vaccines							
Rinderpest							
CBPP							
Combined							
Anthrax							
Black Leg							
TOTAL							
Deliveries of Vaccines	Quant.	Unit price	Quant.	Unit price	Quant.	Unit price	
Rinderpest							
CBPP							
Combined							
Anthrax							
Black Leg							
TOTAL							

Monthly Report

	Monthly Budget	Actual	Variance	%	Cumulative Budget	Cumulative Actual	Variance	%
Sales (value								
Home								
Export								
TOTAL								
Production -								
Standard values								
Raw Materials								
Consumables								
Packaging								
Direct Production								
Salaries								
Social charges								
Total Direct Production Cost								

	Monthly Budget	Actual	Variance	%	Cumulative Budget	Cumulative Actual	Variance	%
Energy								
Water								
Maintenance of buildings								
Maintenance of equipment								
Indirect production salaries								
Social charges								
Depreciation of buildings								
Depreciation of equipment								
Purchase of small equipment								
Total Production Cost								
Variation of finished products								
Variation of work in progress								
Total cost of sales								
Gross margins								

	Monthly Budget	Actual	Variance	%	Cumulative Budget	Cumulative Actual	Variance	%
Overheads								
Salaries								
Taxes								
Fees								
Postage - telephone								
Stationery								
Traveling expenses								
Reception expenses								
Car maintenance								
Gas								
Insurance								
Maintenance of offices, gardens, office buildings								
Purchase of small office equipment								
Goods deliveries								
Depreciation of office furniture and equipment								
Depreciation of office buildings								
Financial charges								
etc.								
etc.								
TOTAL								
Net profit before taxes								
Extra expenses								